

Work Order ID 137649

Wednesday, October 07, 2015 12:42:06 PM

137649

Page 1

Item ID: D4154-041 Accept ***N900040100*** Setup Start ***NS1***
 Revision ID: Stop ***NS2***
 Item Name: Wearplate Assembly
 Start Date: 10/26/15 Start Qty: 2.00 ***2*** Cust Item ID:
 Required Date: 10/26/15 Req'd Qty: 2.00 ***2*** Customer:
 Reference:

Approvals: Process Plan: MLJ Date: OCT 03 2015 Tooling: _____ Date: _____ Run Start ***NR1***
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
D4154	E								

100

0.00

1000

Large Fab

Large Fab

Memo

0.03

1- on D4155-1, fill cut outs with hardcoat welding rod as per dwg D4154

DT9756

2059 B Hardcoat Welding Rod

BATCH#: M130145 → 20596

2-weld D4155-1 to wearplate by positioning holes together as per dwg D4154

304 S.S. Welding Rod

BATCH #: _____

3-Transfer drill holes in bar

4- Use DT9684 to check fit after welding

5- Cut extra material on back end of wearplate if necessary

x2 MR 15-10-20

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					

Root Cause				FAULT CATEGORY							
Environment	☐	No Re-verification	☐	Pressure/Forced	☐	Temperature/Cure	☐	Power Loss/Surge	☐	Positioned Wrong	☐
Design	☐	Operator	☐	Bending	☐	Set-up	☐	Folio/Program	☐	Outside Dimensions	☐
Doc/Data	☐	Offset/Setup	☐	Centre Not Concentric	☐	BOM/Route	☐	Grain	☐	Over/Under tolerance	☐
Equip/Tooling	☐	Supplier	☐	Cracks	☐	Broken/Damage/Defect	☐	Weld	☐	Part Incorrect	☐
Handling/Pre	☐	Training	☐	Crimp/Kink/Ripple/Wave	☐	Inspection Incomplete/Unqualified	☐	Wrong Stock Pulled	☐	Part Lost/Missing	☐
Material	☐	Use for Testing	☐	Cuffs	☐	Contamination	☐	Out of Sequence	☐	Part Moved	☐
Internal Transport	☐	Poor Information	☐	Crushing	☐	Countersink	☐	Off-set	☐	Drawing	☐
Tribal Knowledge	☐	Rushing	☐	Heat Treat	☐	Cut Too Short	☐	Mislabeled	☐	Finish	☐
LOA	☐	Product Improvement	☐	Wave/Twist in Tube	☐	Instructions Incomplete/Unclear	☐	Fit/Function	☐	Misread	☐
Substation	☐	Process Improvement	☐	Marks/Chatter	☐	Drill Holes	☐	Misaligned/off center	☐	Turning Sequence	☐
Past Expiry Date	☐	Manufacturing Process	☐	OTHER : _____							
Misidentified	☐	Past Due	☐								

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Page 2

Item ID: D4154-041

Accept

N900040100

Setup Start

NS1

Revision ID:

Item Name: Wearplate Assembly

Stop

NS2

Start Date: 10/26/15 Start Qty: 2.00

2

Cust Item ID:

Required Date: 10/26/15 Req'd Qty: 2.00

2

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start

NR1

QC:

Date:

SPC (Y/N):

Date:

Stop

NR2Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

110

QC9- Inspect visual per QSI004- Fusion Welds

0.00

110

QC

Memo

0.00

Quality Control

②

15-10-20

DAS

9

9-89

120

QC5- Inspect part completeness to step on W/O

0.00

120

QC

Memo

0.00

Quality Control

②

15-10-20

DAS

9

9-89

150

0.00

150

Small Fab

Memo

0.01

Small Fab

1- After finish, coat entire top (concave) surface as per note 11 on sheet 2 of 3
dwg D4154.

2

DAS

41

9-89

15-10-20

133152

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

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Handling/Pre	☐	Training	☐	Crimp/Kink/Ripple/Wave	☐	Inspection Incomplete/Unqualified	☐
Material	☐	Use for Testing	☐	Cuffs	☐	Contamination	☐
Internal Transport	☐	Poor Information	☐	Crushing	☐	Countersink	☐
Tribal Knowledge	☐	Rushing	☐	Heat Treat	☐	Cut Too Short	☐
LOA	☐	Product Improvement	☐	Wave/Twist in Tube	☐	Instructions Incomplete/Unclear	☐
Substation	☐	Process Improvement	☐	Marks/Chatter	☐	Drill Holes	☐
Past Expiry Date	☐	Manufacturing Process	☐	OTHER :			
Misidentified	☐	Past Due	☐				

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Page 3

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 Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start *NR1*
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
160	QC5- Inspect part completeness to step on W/O	0.00							
160						(2)			DAS
QC	Memo	0.00							38
Quality Control									OCT 21 2015
170	Identify as per dwg & Stock Location: <u>FP-007</u>	0.00							
170									
Packaging	Memo	0.00							XZ d JP 12/10/21
Packaging									
180	QC21- Final Inspection - Work Order Release	0.00							
180									
QC	Memo	0.00							MLS OCT 21 2015
Quality Control									

SH 20151021

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

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Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
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Root Cause		FAULT CATEGORY							
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Design ☐	☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐			
Doc/Data ☐	☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐			
Equip/Tooling ☐	☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐			
Handling/Pre ☐	☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐			
Material ☐	☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐			
Internal Transport ☐	☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐			
Tribal Knowledge ☐	☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐			
LOA ☐	☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐			
Substation ☐	☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐			
Past Expiry Date ☐	☐	Manufacturing Process ☐	OTHER :						
Misidentified ☐	☐	Past Due ☐							

Picklist Print

Wednesday, October 07, 2015 12:42:06 PM

Page 1

Work Order ID: 137649

137649

Parent Item: D4154-041

D4154-041

Parent Item Name: Wearplate Assembly

Start Date: 10/26/15

Required Date: 10/26/15

Start Qty: 2.00

Required Qty: 2.00

Comments: IPP Rev:A 10.09.21 new issue DD verf:EC
 10.11.04 added DT9684 DD verf:EC
 per dwg revB DD verf:EC
 revE DD verf:JLM
 IPP Rev:B
 IPP Rev:C 11.04.14 as
 IPP Rev:D 12.09.14 as per dwg

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D4154-1		Manufactured	No			100	Each	11.0000	1	2			
D4154-1									**	<u>x2</u>	<u>ml</u>	<u>15-10-19</u>	
Plate													
				<u>Location</u>				<u>Loc Qty</u>		<u>Loc Code</u>			
				WA001				11					
				129759				1			<u>x1</u>		
				130516				10			<u>x1</u>		
D4155-1		Manufactured	No			100	Each	15.0000	1	2			
D4155-1									**	<u>x2</u>	<u>ml</u>	<u>15-10-19</u>	
Bar													
				<u>Location</u>				<u>Loc Qty</u>		<u>Loc Code</u>			
				WA001				15					
				130098				1			<u>x1</u>		
				136570				14			<u>x1</u>		

DQA: _____ Date: _____



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Doc/Data	☐	Offset/Setup	☐	Centre Not Concentric	☐	BOM/Route	☐
Equip/Tooling	☐	Supplier	☐	Cracks	☐	Broken/Damage/Defect	☐
Handling/Pre	☐	Training	☐	Crimp/Kink/Ripple/Wave	☐	Inspection Incomplete/Unqualified	☐
Material	☐	Use for Testing	☐	Cuffs	☐	Contamination	☐
Internal Transport	☐	Poor Information	☐	Crushing	☐	Countersink	☐
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Substation	☐	Process Improvement	☐	Marks/Chatter	☐	Drill Holes	☐
Past Expiry Date	☐	Manufacturing Process	☐	OTHER :			
Misidentified	☐	Past Due	☐				

ITEM NO.	QTY.	PART NUMBER	DESCRIPTION
1	X	D4154-041	WEARPLATE ASSEMBLY
2	1	D4154-1	PLATE
3	1	D4155-1	BAR
4	A/R	2059B	HARDCOAT, (SEE NOTE 9, SHT 2)
5	A/R	4714	(SEE NOTE 11, SHT2)

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RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE

WORK ORDER
NO. 137649 MLC

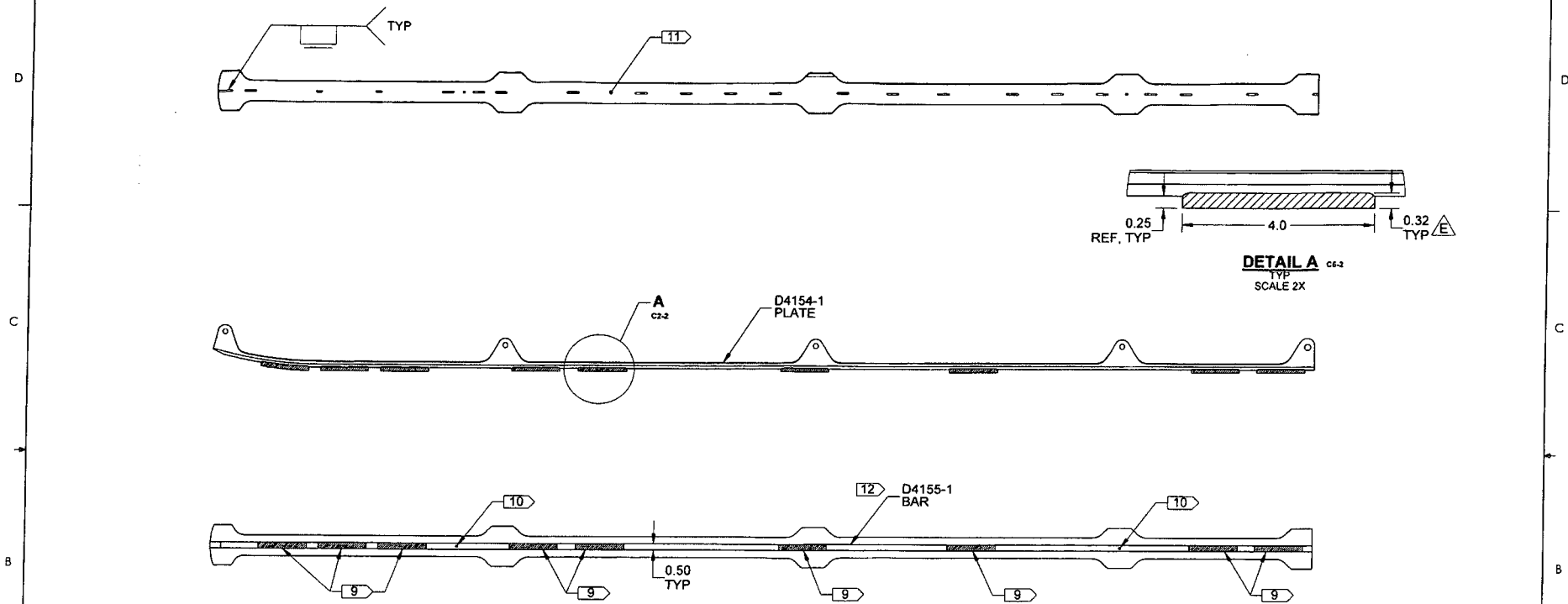
15-10-08

RELEASED
2012-09-04
WV

D4154-041 WEARPLATE ASSEMBLY

E	SHT 3 SLOTS RE-PITCHED (PAR 12-213); 0.32 WAS 0.37	AJS	12.08.07
D	70.45 WAS 74.45 & Ø 0.188 HOLES NOW 2 PL (ZN C4-3 & C7-3)	RF	12.05.03
C	REVISE NOTE 9 (ZN A8-2); ADD HARDCOAT (ZN B7-2); ADD DETAIL A (ZN C2-2)	RF	12.02.21
B	ITEM 4 WAS PR1422 (D3-1); REMOVED FINISH TO NOTE 2 (A8-2); REMOVED SECTION A-A (NO LONGER REQUIRED); REVISED D4154-1F	MB	11.04.05
A	NEW ISSUE	SC	10.07.22
REV.	DESCRIPTION	BY	DATE
DESIGN	SC	DART AEROSPACE USA, INC.	
DRAWN	AJS	KENT, WA	
CHECKED	SP	DRAWING NO.	REV. E
MFG. APPR.	N	D4154	SHEET 1 OF 4
APPROVED	WV	TITLE	SCALE
DE APPR.	#	WEARPLATE ASSEMBLY	NTS
DATE	12.08.07	COPYRIGHT © 2010 BY DART AEROSPACE USA, INC. THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSES OF COMMERCE OR COMMUNICATION TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.	

8 7 6 5 4 3 2 1



D4154-041 WEARPLATE ASSEMBLY

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2012-09-04
MD

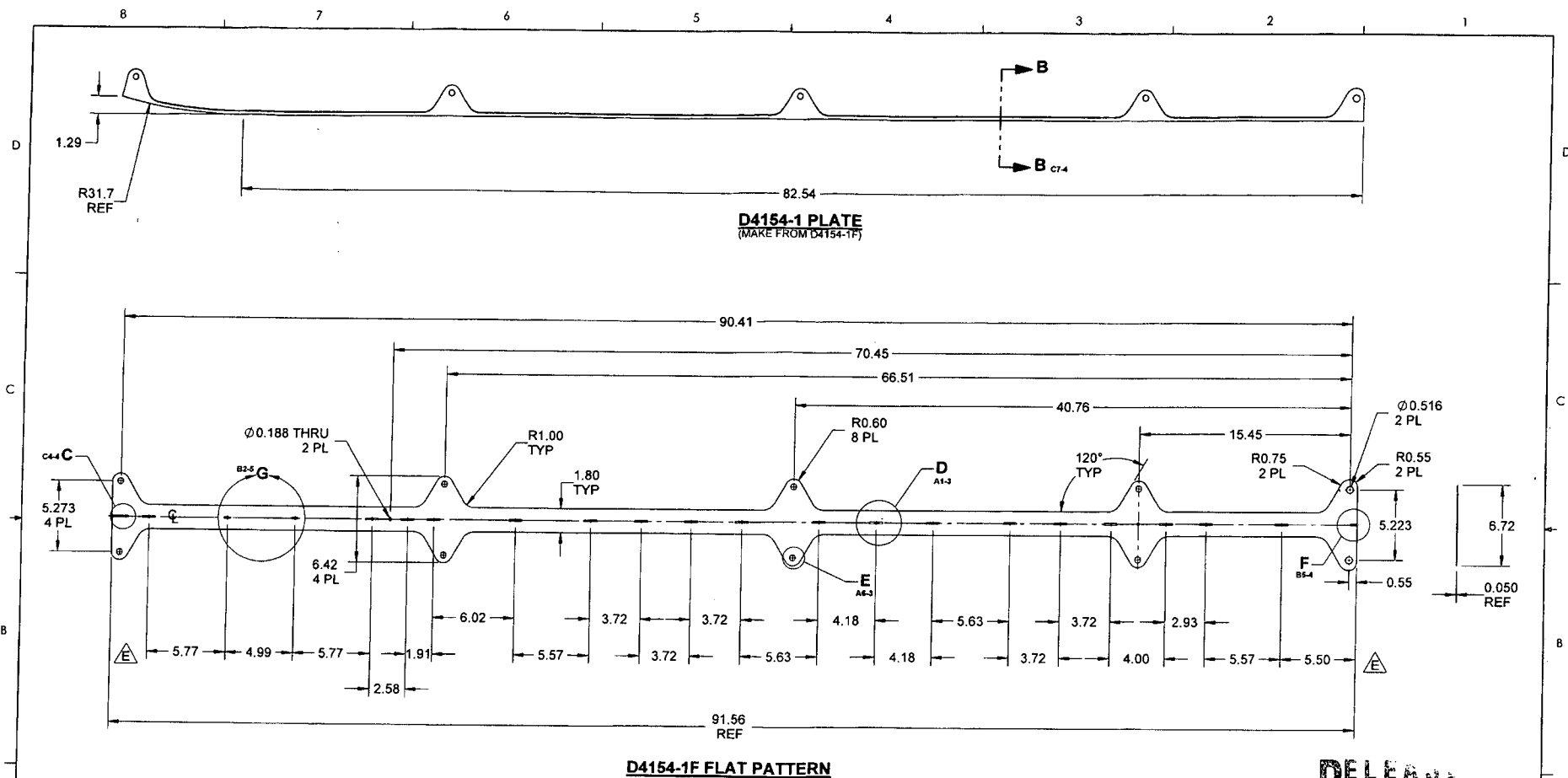
NOTES:

- 1) MATERIAL: N/A
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: N/A
- 6) IDENTIFICATION: IDENTIFY PER QSI 044 6.1
- 7) WEIGHT: 7.75 lbs
- 8) WELDING: PER QSI 004
- 9) 2059B HARDCOAT WELD, 0.32 THICK x 0.50 WIDE, FLUSH WITH D4155-1 BAR ON LATERAL SURFACES, 9 PL Δ
- 10) TRANSFER DRILL ϕ 0.188 HOLES FROM D4154-1 PLATE TO D4155-1 BAR
- 11) COAT ENTIRE TOP (CONCAVE) SURFACE WITH A LAYER OF PLUS ONE ROCK GUARD 4744, 0.020-0.040 THICK
- 12) FORM TO MATCH PROFILE OF D4154-1 AT TIME OF WELDING

has per QSI 005 4.9

PD
15-10-25
500 PAR 15-469.

DESIGN	SC	DART AEROSPACE USA, INC.	
DRAWN	AJS	KENT, WA	
CHECKED	JP	DRAWING NO.	REV. E
MFG. APPR.	DS	D4154	SHEET 2 OF 4
APPROVED	MD	TITLE	SCALE
DE APPR.	CH	WEARPLATE ASSEMBLY	NTS
DATE	12.08.07	COPYRIGHT © 2010 BY DART AEROSPACE USA, INC. THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.	

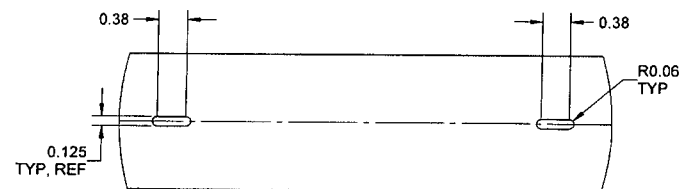
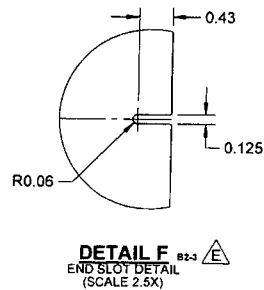
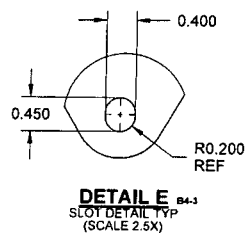
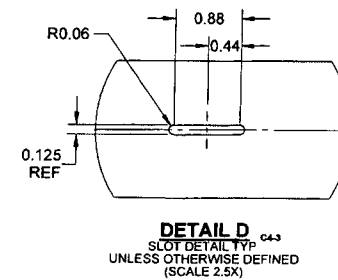
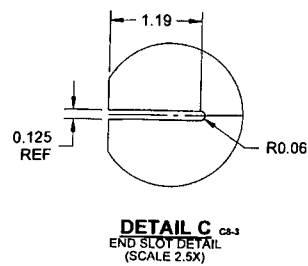
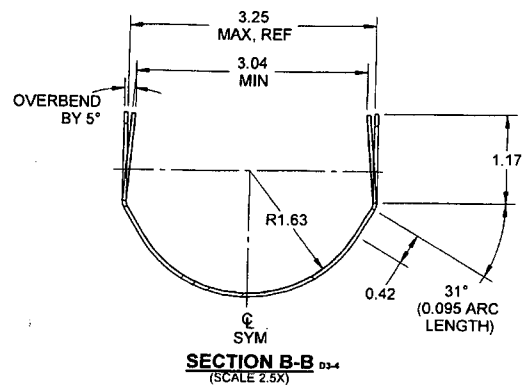


RELEASED
2012-09-04
MD

NOTES:

- 1) MATERIAL : AISI 304/316 STAINLESS STEEL PER AMS 5513 OR 5524 OR ASTM A240 OR ASME SA240 18 GAUGE 0.050 THICK, (REF. DART SPEC. M304S18GA)
- 2) FINISH : NONE
- 3) TOLERANCES : PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS : INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES : 0.005 TO 0.010 MAX
- 6) IDENTIFICATION : NONE
- 7) WEIGHT : 2.95 lbs

DESIGN	SC	DART AEROSPACE USA, INC. KENT, WA	
DRAWN	AJS		
CHECKED	<i>[Signature]</i>	DRAWING NO. D4154	REV. E
MFG. APPR.	<i>[Signature]</i>		SHEET 3 OF 4
APPROVED	<i>[Signature]</i>	TITLE WEARPLATE ASSEMBLY	SCALE NTS
DE APPR.	<i>[Signature]</i>	COPYRIGHT © 2010 BY DART AEROSPACE USA, INC. THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.	
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2012-09-04
JMP

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